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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/674,661	07/02/2001	Arne Godal	Q-61582	5309

7590 04/01/2004

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EXAMINER	
HENDRICKSON, STUART L	

ART UNIT	PAPER NUMBER
1754	

DATE MAILED: 04/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

AS

Office Action Summary

Application No.	Applicant(s)
09/614,661	
Examiner	**Group Art Unit**
Atkinson	1754

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication .
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

☒ Responsive to communication(s) filed on Amv 3/15/04.

☐ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle,* 1935 C.D. 1 1; 453 O.G. 213.

Disposition of Claims

☒ Claim(s) 15-30 is/are pending in the application.

Of the above claim(s) 29 is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 15-27, 29, 30 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☒ Claim(s) 15-30 are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 11 9(a)-(d).

☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☒ received in this national stage application from the International Bureau (PCT Rule 1 7.2(a)).

*Certified copies not received: _____.

Attachment(s)

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Reference(s) Cited, PTO-892

☐ Notice of Informal Patent Application, PTO-152

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Other _____

Office Action Summary

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

Group I, claim(s) 15-27, 29, 30, drawn to a process.
Group II, claim(s) 28, drawn to an apparatus.

The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: The groups do not have a patentable feature linking them, given that the process is not patentable (infra). The apparatus can be used in a different process such as to make silica and there is a burden of search.

During a telephone conversation with Mr. Kit on 3/22/04 a provisional election was made without traverse to prosecute the invention of Group I, claims 15-27, 29, 30. Affirmation of this election must be made by applicant in replying to this Office action. Claim 28 is withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 15- 27, 29, 30 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for making carbon black, does not reasonably provide enablement for making fullerenes. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims. It appears that this application is directed to making carbon black.

Furthermore, the use of the subscripts in claim 15 incorrectly implies that a compound with a definite formula is made. Specification pg. 2 states that soot has a formula of C40, but this is speculative and the term 'soot' encompasses a myriad of

other materials. Finally, there is no indication as to what evidence exists that this proposed formula is correct.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 15-27, 29, 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A) Claim 15 is unclear as to 'average'. What different things are being considered?

B) In claim 17, 'rapidly' is subjective and unclear.

C) In claim 18, 'assisted' is not clear. It appears that the oxygen is consumed to make the flame.

D) In claim 21, 'interspersed' is unclear if that the term normally refers to a physical admixture or sequence.

E) Claims 19 and 20 are unclear if they intend to limit the temperature to 1000.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 15-27, 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lynum 5527518.

Lynum teaches making carbon black by heating hydrocarbons in a flame, and recycling the hydrogen to burn it for heat. Lynum does not teach the formula, but no differences are seen as the present specification makes carbon black. The discussion of this reference is noted and is deficient as Lynum teaches the ption of adding oxidant to the gas environment to alter the carbon. Therefore, addition of a minor amount of oxygen at the velocity of claim 22 is within the claimed range is a matter of optimization; In re Boesch 205 USPQ 215. Concerning claim 17, the overlapping temperature of 1000 is taught. Claims 18-20 appear to describe only how to make a flame; that the reference uses a flame implies that these steps are followed; the examiner takes Official Notice that it is known to burn hydrocarbons in oxygen to make a flame.

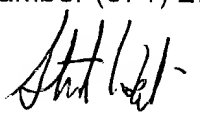
Claims 15-21, 23-26, 29, 30 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Morgan et al. 3619140. Morgan teaches making a hot flame and burning oil at substoichiometric oxygen level to make carbon black. Although the formula is not recited, no differences are seen.

Claims 22 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morgan et al.

Morgan does not explicitly teach the velocity, but teaches turbulent conditions. Using a high velocity in the range claimed is thus an obvious measure to create turbulence. Concerning claim 27, burning the hydrogen is an obvious expedient to recover the heat content thereof.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Any inquiry concerning this communication should be directed to examiner Hendrickson at telephone number (571) 272-1351.



Stuart Hendrickson
examiner Art Unit 1754